WHAT IS CLAIMED IS:

1. A semiconductor wafer obtained, at least, by removing a mechanical damage layer by etching both surfaces of the wafer, flattening one of the surfaces by a surface-grinding means, polishing both of the surfaces, and then subjecting a front surface of the wafer to a finishing mirror-polishing when defining the surface subjected to surface-grinding as a back surface of the wafer.

2. A method for fabricating a semiconductor wafer comprising at least slicing a wafer from a semiconductor ingot, lapping both surfaces of the wafer, removing a mechanical damage layer by etching treatment, flattening one of the surfaces by a surface-grinding means, polishing both of the surfaces, and then subjecting a front surface of the wafer to a finishing mirror-polishing when defining the surface subjected to surface-grinding as a back surface of the wafer.

3. The method for fabricating a semiconductor wafer according to Claim 2 wherein mirror edge polishing is conducted before or after polishing both of the surfaces.

4. The method for fabricating a semiconductor wafer according to Claim 2 wherein the etching treatment is conducted by a wet etching method using an alkali solution as an etching solution.

5. The method for fabricating a semiconductor wafer according to Claim 3 wherein the etching treatment is conducted by a wet etching method using an alkali solution as an etching solution.